PROCESS OF FORMING FIELD EMISSION ELECTRODE FOR MANUFACTURING FIELD EMISSION ARRAY

ABSTRACT OF THE DISCLOSURE

A process of forming a field emission electrode for manufacturing a field emission array is provided. The process includes steps of (a) providing a substrate having a metal layer thereon, (b) forming a plurality of mask units on the metal layer and partially removing the metal layer uncovered by the mask units, (c) oxidizing a surface of the remained metal layer by an anodic oxidization method for forming a metal oxide layer thereon such that an upper portion of the unoxidized remained metal layer is in the shape of plural conoids, and (d) removing the remained mask units and the metal oxide layer. Alternatively, the process includes steps of (a) providing a substrate having a first metal layer thereon, (b) forming a plurality of mask units on the first metal layer and partially removing the first metal layer uncovered by the mask units, (c) oxidizing a surface of the remained first metal layer by an anodic oxidization method for forming a metal oxide layer thereon such that an upper portion of the unoxidized remained first metal layer is in the shape of plural cylinders, (d) forming a second metal layer on the metal oxide layer, and (e) removing the remained mask units.